

XVII. *Some observations on the tea-bugs (Helopeltis) of India and Java.* BY CHARLES O. WATERHOUSE.

[Read October 6th, 1886.]

PLATE XI.

SOME short time since Mr. H. B. Brady presented to the British Museum a series of specimens of *Helopeltis*, named *Helopeltis Antonii*, Sign., which had been doing much mischief in the Cinchona plantations in Java, and had been the subject of a paper in the 'Pharmaceutical Journal' (December, 1885). The species was supposed to be the Ceylonese tea-bug, and to have been imported into Java. I noticed, however, at the time that the specimens did not quite agree with the figure of *H. Antonii* given in the 'Annales de la Soc. Ent. de France' (1858, pl. 12, f. 2), but I was not able to decide as to the identity of the species, never having seen specimens from Ceylon. I am glad to say that Dr. Trimen, who is at present on a visit to England, brought with him a number of specimens of the Ceylonese tea-bug, and, having presented some examples to the British Museum, I am able to say that they are distinct from those received from Java. Mr. F. Moore has kindly lent me a specimen of a third species, the Assamese tea-bug, to which he gave the name *Helopeltis theivora*. The description of this species does not appear ever to have been published.

In the 'Gardeners' Chronicle' for April, 1874, p. 475, there is an article by Prof. Westwood, describing the tea-bug of Java; it is called *Helopeltis Antonii*, and is supposed to have been introduced from Ceylon.

Whether the specimens from the tea-plants in Java are the same species as those which attack the Cinchona I am not at present able to say; but, from a note which I have received from Prof. Westwood, they appear to be distinct.

The following descriptions will, I hope, serve to distinguish the three species:—

Helopeltis Antonii. (Pl. XI., fig. 4).

Black. Thorax red, with a blackish line in the anterior constriction. Scutellum blackish, inclined to red at the sides; the horn perpendicular, straight, yellowish. Antennæ brown; the extreme base testaceous. Legs dirty yellow, speckled with brown.

All the specimens I have seen are the same colour, and are therefore probably all females. The males would probably have the thorax black.

Helopeltis Bradyi, n. s. (Pl. XI., figs. 1 & 2).

♀. Black. Thorax deep red, with the anterior margin black. Scutellum reddish yellow, with the base of the horn black; the horn perpendicular and straight, yellowish. Antennæ black, with the extreme base testaceous. Legs black, with a ring of pale yellow at the base of the femora; tibiæ brownish. The sides of the basal segments of the abdomen are clear yellow, as in *H. Antonii*. Length, about $5\frac{1}{2}$ mm.

The male has the thorax and scutellum black, and the horn of the latter is blackish, with a little brown at the base. The abdomen has less yellow at the sides.

This species appears to average a trifle larger than *H. Antonii*, and the females are a little broader.

Helopeltis theivora. (Pl. XI., fig. 3).

♀. Black. Thorax orange-yellow, with a black line near the front margin, the base margined with black. Scutellum brown, black at the base, the horn long, much curved; black, brown at the apex. Antennæ dark brown; the basal joint paler, yellow at the base. Femora dark brown, mottled with light brown, with a light yellow ring at the base. Tibiæ light brown, speckled with dark brown.

This species is at once distinguished from the two preceding species by the longer and curved horn on the scutellum.

Mr. Peal, in his paper on "The tea-bug of Assam" ('Journ. Agri. Hort. Society of India,' iv. (1872), p. 131), states that when full grown "the colour deepens," and "it turns black on the head and thorax." This remark probably refers to the male.

Two other species of this genus are known to me: *Helopeltis niger*, Walker, from Waigiou,* and *H. braconi-*

* Not "Wagrin," as printed in the 'Gardeners' Chronicle.'

formis, Walker, from Dorey, New Guinea (Cat. Hemipt. Het. in B. M., vi., 1873, p. 165). This latter Mr. Walker also described under the name *Dulichius? clarifer* (l. c., iv., 1871, p. 170).

Helopeltis niger, Walker. (Pl. XI., fig. 6).

The type appears to be a male. It is black, with the antennæ dark brown, the basal joint yellowish brown. The legs are pale brown, with a few darker spots on the femora. The scutellar horn is long, very slightly curved; light brown, with the extreme base and apex black.

Helopeltis braconiformis, Walker. (Pl. XI., fig. 5).

♂. Black, or nearly so. Antennæ brown, with the basal joint pale brown. Scutellar horn long, very slightly curved, very pale brown, with the extreme base and apex dark brown. Legs pale brownish yellow, with a few dusky spots on the femora.

♀. Antennæ dark brown. Thorax light red, inclined to yellow in front, with the anterior margin black. Scutellum pale red; the horn very pale brown. Legs dark brown, some spots on the femora and the tibiæ paler, but not so pale as in the male.

GENERAL REMARKS.

H. Antonii and *H. Bradyi* will easily be distinguished from the three other species by the form of the scutellar horn, which is small, very slender, and erect.

H. theivora, *niger*, and *braconiformis* have the scutellar horn longer and stouter. *H. theivora* has the horn much more curved than in either *H. ater* or *braconiformis*.

H. ater and *H. braconiformis* only differ in the colour of the legs and antennæ, except that the single specimen of *ater* has the thorax jet-black, whilst both the males of *braconiformis* have the base of the thorax smoky brown. The scutellar horn is somewhat different.

Prof. Westwood, in the note which I received from him, above referred to, states that the specimens he had from the tea-plants in Java, and which he considered to be *Helopeltis Antonii*, "have the front of the pronotum nearly whitish buff, antennæ and head black, scutellar spine dirty buff-brown, legs buff varied with black." This description does not correspond with any specimens I have yet seen.

EXPLANATION OF PLATE XI.

- FIG. 1. *Helopeltis Bradyi*, male.
2. *H. Bradyi*, female; *a*, scutellar spine.
3. *H. theivora*, female; *a*, scutellar spine.
4. *H. braconiformis*, female; thorax and scutellum; *a*,
scutellar spine; *b*, spine of male.
5. *H. Antonii*, female; thorax and scutellum; *a*, scutellar
spine.
6. *H. niger*; scutellar spine of male.